

# LAPAROSCOPIC STERILIZATION

## A Review of 238 Cases

**DR. OMAR A. KASSIM, L.M., D.G.O., M.R.C.O.G.**

Registrar, Ards Hospital, Newtownards, Co. Down, N. Ireland

At present Consultant Obstetrician and Gynaecologist,  
City Hospital, Kano, Nigeria, W.A.

IN RECENT YEARS laparoscopic sterilization has become a popular method of active birth control. Between 1971 and 1973, 238 patients were treated by this technique in Ards Hospital. This paper reviews these patients, their selection, the operative procedure employed, the results, the complications and the operative failures.

### SELECTION OF THE PATIENTS

A request for sterilization was furnished by general practitioners and the operations were performed under the National Health Services. The patients were booked and their names placed on the waiting list. A number of surgeons shared the operative responsibility. Of 238 patients, 65 (27.2 per cent) were between 20 – 30 years, 140 patients (60.0 per cent) were between 30 – 40 years and 33 patients were between 40 and 50 years. Most of these patients were taking the contraceptive pill for periods of three to seven years, although a small number of couples were using the sheath for birth control. Many suffered chronic cervicitis. Patients who requested post partum sterilization were operated on six weeks after delivery. Here this replaced post partum tubal ligation as it was thought to reduce the post partum depression frequently met with in newly delivered mothers. It replaced post partum laparoscopic sterilization and avoided risk of injury to the bulky uterus and oedematous tubes (Whiteley, 1971).

TABLE

Para.	0	1	2	3	4	5	6	7	8	9	10	unspecified
Number	4	9	58	66	42	16	9	1	1	1	1	31

The table shows the parity of the patients. The majority of the patients had two to four children. Four nulliparous patients were sterilised on psychiatric grounds and one of the four had termination of pregnancy at the same time. Patients who suffered chronic cervicitis were treated at operation by cervical diathermy or diathermy conisation at operation.

### PROCEDURE

At operation the technique of Steptoe (1967) was followed. An assistant carried out dilatation and curettage and if necessary cauterisation of the cervix. He could

also manipulate the uterus from the vagina. With the patient in the Trendelenberg position, a small transverse preliminary incision was made just below the umbilicus. Pneumo-peritoneum was obtained using de Verres cannula through which 2½ to 3 litres of carbon dioxide were introduced. An incision was then made in one iliac fossa, more often the right. The diathermy forceps were introduced and each fallopian tube was burnt twice and divided. The fallopian tubes were re-inspected and, provided all was well, the instruments were removed deflating the peritoneal cavity in the process. The skin incisions were stitched with braided silk which was removed at a later date in the hospital or by the general practitioner or district midwife. The difficulty that was sometimes met with to build up the pneumo-peritoneum in obese patients was obviated by not lifting the abdominal skin while the needle and the trocar and cannula were introduced.

### SURGICAL COMPLICATIONS

Apart from the two patients who developed complications, all the patients were discharged 48 hours after the operation. They were followed up by their general practitioners, who all replied promptly to a questionnaire, and no minor complications were recorded.

#### *Case 1: Perforation of the small bowel*

A 34-year-old mother had three normal deliveries. She had laparoscopic sterilization, dilatation and curettage and removal of the intra-uterine contraceptive device. She was discharged next day. She was re-admitted on the next day with acute lower abdominal pain. Bowel sounds were absent. Laparotomy was performed and acute ulceration of the terminal ileum was found. The involved area was excised and re-sutured. She was given Noxyflex saline drip into the peritoneum and Ampicillin post-operatively. She made a satisfactory recovery. The pathologist reported "Acute ulceration with perforation of intestine (ileum). No polyarteritis." The pathologist stated that study failed to recognise any specific features at the perforation site. The patient was discharged on the tenth post-operative day with a haemoglobin 13.2 gm/100 ml.

#### *Case 2: Acute salpingitis with broad ligament haematoma*

A 24-year-old mother, married, who had had no miscarriages, and had four normal deliveries, all children alive and well. She had laparoscopic sterilization and dilatation and curettage and conisation of the cervix. She was discharged the following day, but she was re-admitted on the seventeenth post-operative day. On admission she was suffering from heavy vaginal bleeding and acute lower abdominal pain. She was examined vaginally under general anaesthesia. The bleeding cervix was burnt by diathermy and laparotomy was performed. A small broad ligament haematoma was found and the appendix was removed. She made a satisfactory recovery. She was discharged on the tenth day with haemoglobin 11.5 gm/100 ml. The appendix showed a few thread worms.

### OPERATIVE FAILURES

#### *Case 1: Ectopic pregnancy*

A 40-year-old mother, who had three normal deliveries, was on the pill for five years. She had dilatation and curettage, diathermy of the cervix and laparoscopic sterilization. She was discharged the following day. She was re-admitted four months later with severe crampy lower abdominal pain. She was pale with weak pulse, a B.P. 90/60 and haemoglobin 9.6 gm/100 ml, and she had a positive pregnancy test. On examination she had rebound tenderness and guarding rigidity of the lower abdomen.

The cervix was very tender and the uterus ill-defined. A laparotomy through a Pfannenstiel incision was performed and a ruptured ectopic pregnancy confirmed in the left tube. She had left salpingo-oophorectomy and was discharged after ten days with a haemoglobin of 11.2 gm/100 ml. The pathologist mentioned "Probably the ectopic pregnancy had been implanted in the fimbrial end of the tube and has been expelled. No evidence of predisposing pathology in the fallopian tube."

### *Case 2: Normal pregnancy*

A 29-year-old mother after four normal deliveries had a laparoscopic sterilization. She was re-admitted four weeks later with amenorrhoea dating since operation and a positive pregnancy test. Normal pregnancy was terminated by dilatation and evacuation and a repeat laparoscopic sterilization was carried out at the same time. She made a satisfactory recovery and was discharged with a haemoglobin of 12.6 gm/100 ml. Both round ligaments had been cauterised in the first instance.

## DISCUSSION

A series of 238 laparoscopic sterilizations have been reviewed. There were two surgical complications and two operative failures. The method resulted in permanent sterility with two exceptions. Patients required to remain in hospital for only 48 hours.

Neely and El-Kady (1972), in their series of puerperal laparoscopic sterilization, reported two cases who suffered from hypotension, two cases of bleeding from broad ligament vessels and two cases who developed bleeding from the fundus of the uterus due to trauma from the pneumo-peritoneum needle.

Levinson, Schwartz and Saltzstein (1973) reported two cases of perforation of the small bowel which occurred during tubal sterilization by cautery through the laparoscope. Their report indicates the clinical course of this unusual and serious complication, emphasises prophylactic measures to avoid it and recommends immediate operative intervention with small bowel resection as the appropriate therapy. Coagulation necrosis results either from applying the cautery directly or from sparking. It is recommended that all equipment should be checked and must be kept in perfect working condition. It is also recommended that the cautery attachment should be connected only during cauterisation.

I wish to thank Dr. F. G. Grant, F.R.C.O.G., for his encouragement. I wish also to thank Dr. J. H. N. Ferris, M.R.C.O.G., who allowed me to operate on his patients. I wish to extend special gratitude to all the 29 general practitioners who helped with this survey and to the medical and surgical teams of Ards and Bangor Hospitals. Also, I thank Miss A. Cowie, the departmental secretary who dealt with all the filing and correspondence.

## REFERENCES

1. STEPTOE, P. C. (1967), *Laparoscopy in Gynaecology*, Livingstone, Edinburgh.
2. LEVINSON, SCHWARTZ and SALTZSTEIN (1973), *Obstet. Gynec.*, **41**, 253.
3. NEELY, M. R. and EL-KADY (1972), *J. Obstet. Gynaec. Brit. Cwlth.*, **79**, 1025.
4. WHITELY, P. F. (1972), *J. Obstet. Gynaec. Brit. Cwlth.*, **79**, 166.